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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,643	11/21/2003	Pierre Ramillon	245505US41X CONT	9151
22850	7590	07/12/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			DESTA, ELIAS	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,643	RAMILLON ET AL.	
	Examiner	Art Unit	
	Elias Desta	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 21 November 2003.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-18 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 1-18 is/are allowed.
 6) Claim(s) _____ is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 21 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/21/2003</u> .	6) <input type="checkbox"/> Other: _____ .

Detailed Action

Drawing

1. The drawing is objected to because of the following minor informalities:
 - Fig. 4: label the “context” box as ‘12’ and the “useful signature” box as ‘28’; and
 - Fig. 9: the label on “useful signature” should be ‘28’ rather than ‘16’.

Specification

2. The specification is objected to because of the following minor informalities:
 - Applicant is required to review the specification for factual and technical error. For instance:
 - Page 1, paragraph 3, 1st line: delete “no such methods exist as yet” since applicant does not know the outcome of the prosecution as yet;
 - Page 1, paragraph 3, 5th line: replace “To identify …” with “In order to determine …”;
 - Page 9, paragraph 44: delete the word “diagrammatically”; and

- o Page 15, paragraph 68: better reads “In order to resolve …” rather than “To resolve …”

Allowance

3. Claims 1-18 are allowed. The following is an examiner’s statement of reasons for allowance:

In reference to claims 1 and 14: DiMaggio et al. (U.S. PAP 2003/0028332) teaches a rocket engine gear defect monitoring method (see DiMaggio et al., Fig. 1 and abstract). The parameters used to monitor the nature of the engine under test is conducted in relation to other test engines and collected data; then measurements acquired during ground testing of a rocket engine are preferably converted into a parameter that is indicative of anomalous behavior of the mechanical system (see DiMaggio et al., page 2, paragraph 19). However, DiMaggio et al. uses tachometer measurement rather than the spectrum of distinct noise signals.

Whereas the claimed invention, as noted above, provides a spectrum base analysis that includes: recording signals simultaneously at different locations of a predetermined space; storing parameters related to the conditions under which the recording are made; determining the spectrum of the signal; detecting a line emerging from the background noise of the spectrum by using a predetermined

emergence threshold; comparing the line with some or all of the signatures included in the set identified signatures; selecting at least one signature corresponding to the line to create at least one signature/line pair and identifying a source of the signal based on the selection.

The remaining claims are dependent upon claims 1 and 14 and contain further limitations.

Conclusion

4. This application is in condition for allowance except for the following formal matters: see specification and drawing objections above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire TWO MONTHS from the mailing date of this letter.

Citation of pertinent prior art:

- a. Qian et al. (U.S. Patent 6,332,116) teaches system and method for analyzing signals of rotary machines.
- b. Bartle et al. (U.S. Patent 4,603,584) teaches acoustic detection of defects in structures.
- c. Wegerich (U.S. PAP 2003/0220767) teaches

- d. Geib et al. (U.S. Patent 5,804,726) teaches acoustic signature analysis for a noisy environment.
- e. Oravecz (U.S. PAP 2003/0023393) teaches acoustic micro imaging method and apparatus for capturing 4D acoustic reflection virtual samples.
- f. Morais (U.S. Patent 4,036,057) teaches automatic threshold control means for acoustic emission and other informational discriminating systems.
- g. Marko et al. (U.S. PAP 2003/0216889) teaches remote diagnostics and prognostic methods for complex systems.
- h. Wegerich et al. (U.S. PAP 2002/0183971) teaches a system method and program product for sub-band domain signal validation.
- i. Wegerich (U.S. PAP 2001/0049590) teaches a system, method and program product for monitoring a complex signal for ultra sensitive detection of state changes.
- j. Ottosson (U.S. PAP 2001/005821) teaches method and system for monitoring the condition of an individual machine.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Desta whose telephone number is (571)-272-2214. The examiner can normally be reached on M-Thu (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)-272-2216. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-308-5841 for regular communications and (703)-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.

Elias Desta
Examiner
Art Unit 2857

-ed

July 7, 2004


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800